

Application No. 10/510,931
Paper Dated June 22, 2006
In Reply to USPTO Correspondence of March 22, 2006
Attorney Docket No. 1918-045358

REMARKS

The Office Action of March 22, 2006 has been reviewed and the Examiner's comments carefully considered. The present Amendment amends claims 14 and 22 all in accordance with the specification and drawings as originally filed. No new matter has been added. Furthermore, the present Amendment cancels claim 24, without prejudice. The Examiner has now finalized his restriction requirement and withdrawn claims 17, 18 and 21 from further consideration. The Applicant explicitly reserves the right to file a divisional application directed to the non-elected claims. Accordingly, claims 14-16, 19, 20, 22, 23 and 25 were examined on their merit in this application, and claim 14 is in independent form.

Drawings

The Applicant would like to note that the Examiner has not indicated whether the drawings filed concurrently with the present application are accepted. Box 10 on the Office Action Summary (PTO Form 326) has not been checked. Accordingly, the Applicant respectfully requests that the Examiner provide an indication in response to this Amendment that drawings are accepted.

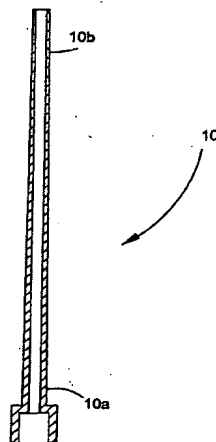
35 U.S.C. § 102 Rejections

Claims 14-16, 19, 20 and 22 stand rejected under 35 U.S.C. § 102(b) for anticipation by United States Patent No. 4,611,759 to Cox (hereinafter "the Cox patent"). In view of the above amendments and the following remarks, the Applicant respectfully requests reconsideration of this rejection.

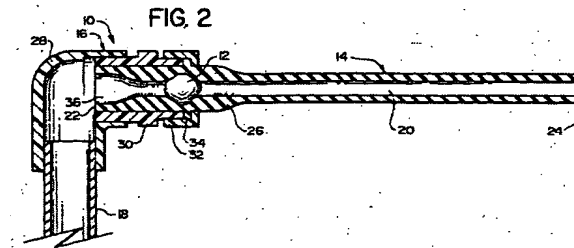
The present invention is directed to an emitter tube suitable for an irrigation system. The tube is formed from a resiliently flexible material and includes a base inlet end adapted to be mounted and a free outlet end adapted to be un-mounted. The tube further includes a base section adjacent to the base inlet end and an end section downstream from the base section. An inner diameter of the emitter tube is substantially constant, while an outer diameter of the emitter tube tapers evenly from the base section to the outlet end. The end section has greater flexibility than the base section. Hydraulic forces exerted by the flowing liquid on the emitter tube cause the outlet end to move continuously with a liquid flowing at a sufficient rate through the emitter tube.

The Cox patent discloses a nozzle for expelling a fluid stream. The nozzle is comprised of a resiliently flexible tube having an effective length at least equal to one harmonic wavelength of a coupled fluid stream. The nozzle further includes a proximal end and a distal end. The proximal end includes a shoulder portion with a thicker wall section than the distal end. In one embodiment, the inner diameter of the tube tapers from the proximal end toward the distal end.

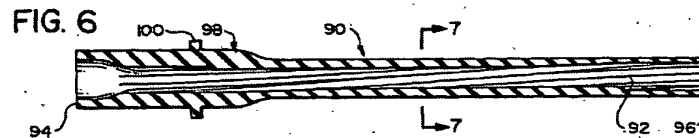
The Cox patent does not teach or suggest that an inner diameter of the emitter tube is substantially constant, while an outer diameter of the emitter tube tapers evenly from the base section to the outlet end as required by amended independent claim 14. As is clearly illustrated in Fig. 1 of the present application presented below, the emitter tube of the present invention includes an inner diameter that is substantially constant and an outer diameter that tapers evenly from the base section to the outlet end.



The Cox patent, on the other hand, does not disclose an embodiment of a nozzle with such a feature. While the Cox patent discloses a nozzle with an inner diameter that is substantially constant, the outer diameter fails to taper evenly, if at all, from the base section to the outlet end as is clearly shown in Fig. 2 of the Cox patent presented below.



Furthermore, the Examiner relies on the embodiment illustrated in Fig. 6 of the Cox patent as disclosing a nozzle with a wall thickness that tapers evenly from a base section to an outlet end (see Page 4 of the Office Action). However, only an end section (i.e., reference numeral 96) of the nozzle illustrated in Fig. 6 tapers evenly and the inside diameter of the tube instead of the outside diameter is tapering as is clearly shown in Fig. 6 presented below.



Therefore, the Cox patent fails to teach or suggest that an inner diameter of the emitter tube is substantially constant, while an outer diameter of the emitter tube tapers evenly from the base section to the outlet end. The tapering of the emitter tube in this manner provides several advantages over prior art emitter tubes, including the Cox patent, such as an increased radius of throw with a more uniform water distribution as described on page 8, lines 20-21 of the specification of the present application.

For the foregoing reasons, the Applicant believes that the subject matter of amended independent claim 14 is not anticipated by the Cox patent. Reconsideration of the rejection of claim 14 is respectfully requested.

Claims 15, 16, 19, 20 and 22 depend from and add further limitations to amended independent claim 14 or a subsequent dependent claim and are believed to be patentable for the reasons discussed hereinabove in connection with amended independent claim 14. Reconsideration of the rejection of claims 15, 16, 19, 20 and 22 is respectfully requested.

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35 U.S.C. § 103 Rejections

Claims 23-25 stand rejected under 35 U.S.C. § 103(a) for obviousness based upon the Cox patent. In view of the following remarks, the Applicant respectfully requests reconsideration of this rejection.

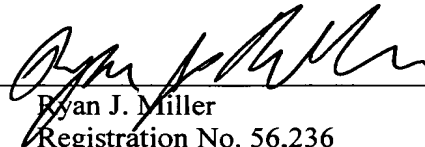
Claim 24 has been cancelled by this Amendment, thus rendering the rejection of claim 24 moot. Claim 23 depends from and adds further limitations to amended independent claim 14, and claim 25 depends from and adds further limitations to claim 23. These claims are believed to be patentable for at least the reasons discussed hereinabove in connection with amended independent claim 14. Reconsideration of the rejection of claims 23 and 25 is respectfully requested.

Based on the foregoing amendments and remarks, reconsideration of the rejections and allowance of pending claims 14-16, 19, 20, 22, 23 and 25 are respectfully requested.

Respectfully submitted,

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